

Patent Claims

1. Semi crystalline, melt processible, partially aromatic copolyamides, producible by condensation of at least the following monomers or precondensates thereof:
 - a) terephthalic acid
 - b) at least one dimerised fatty acid with up to 44 carbon atoms and
 - c) at least one aliphatic diamine of the formula $H_2N-(CH_2)_x-NH_2$, wherein x means a whole number from 4 - 18.
2. Copolyamides according to claim 1, characterised in that the melting point of these copolyamides, measured by means of DSC (Differential Scanning Calorimetry), is at most 335°C.
3. Copolyamides according to claim 1 or 2, characterised in that a further aromatic dicarboxylic acid d) with 8 - 12 C atoms is present.
4. Copolyamides according to one of the claims 1 to 3, characterised in that in addition an aliphatic dicarboxylic acid e) with 6 - 18 C atoms is present.
5. Copolyamides according to one of the claims 1 to 4,

characterised in that in addition a lactam and/or an aminocarboxylic acid with 6 - 12 C atoms, preferably ω -aminolauric acid, are present as further monomers f).

- 5 6. Copolyamides according to one of the claims 1 to 5,
characterised in that the aromatic dicarboxylic acid d) is
isophthalic acid.
- 10 7. Copolyamides according to one of the claims 1 to 6,
characterised in that the aliphatic dicarboxylic acid e) is
adipic acid.
- 15 8. Copolyamides according to one of the claims 1 to 7,
characterised in that, in addition to the monomers a), b)
and c) wherein $x = 6$, isophthalic acid (d) is present and
the melting point of these copolyamides, measured by
means of DSC, is at least 290°C.
- 20 9. Copolyamides according to one of the claims 1 to 7,
characterised in that, in addition to the monomers a), b)
and c) wherein $x = 6$, adipic acid (e) is present and the
melting point of these copolymers, measured by means of
DSC, is at least 270°C.
- 25 10. Copolyamides according to one of the claims 1 to 7,
characterised in that, in addition to the monomers a), b)
and c) wherein $x = 6$, isophthalic acid (d) and adipic acid
(e) is present and the melting point of these copolyamides,
measured by means of DSC, is at least 265°C.
- 30 11. Copolyamides according to one of the claims 1 to 7,

characterised in that, in addition to the monomers a), b) and c) wherein $x = 6$, laurinlactam (f) or ω -aminododecanoic acid (f) is present and the melting point of these copolyamides, measured by means of DSC, is at least 255°C.

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12. Copolyamides according to one of the claims 1 and 3 to 7, characterised in that $x = 9, 10$ or 12.

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13. Copolyamides according to claim 12, characterised in that, in addition to the components a), b) and c), adipic acid (e) is present.

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14. Use of the copolyamides according to one of the claims 1 to 13, for the production of moulded articles by means of melt processing methods.

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15. Use of the copolyamides according to claim 14, hard-soft combinations being produced as moulded articles.

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16. Use of the copolyamides according to claim 14 or 15, the processing method being selected from extrusion, injection moulding, coextrusion, blow moulding, deep drawing, sequential coextrusion, sequential extrusion blow moulding, 3D blow moulding, coextrusion blow moulding, coextrusion 3D blow moulding and coextrusion suction blow moulding.

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17. Moulded article produced from or with copolyamides according to one of the claims 1 to 13.

18. Moulded article according to claim 17,
characterised in that it is a hard-soft combination.